

## REMARKS

Claims pending in the instant application are numbered 1-27. Claims 1-8, 10-17 and 19-26 are rejected. Claims 9, 18 and 27 are objected to.

The Applicant respectfully requests reconsideration of the present application in view of the amendments and the following remarks.

### *35 U.S.C. § 102 and § 103 Rejections*

Claims 1 and 19 are rejected under 35 U.S.C. § 102(a) as being anticipated by Duesterwald, "Software Profiling for Hot Path Prediction: Less is More", ACM 2000. Claims 1 and 19 are rejected under 35 U.S.C. § 102(b) as being anticipated by Conte, "Using Branch Handling Hardware to Support Profile-Driven Optimization."

Claims 1-8, 10-17, and 19-26 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Wu, "An Efficient Software-Hardware Collaborative Profiling Technique for Wide Issue Processors", in view of Conte, "Using Branch Handling Hardware to Support Profile-Driven Optimization."

Claim 1 as presently amended expressly recites (in pertinent part):

"signaling profile phase transitions to a dynamic optimizer by the profiling hardware."

The Applicant submits that Duesterwald fails to disclose "signaling profile phase transitions to a dynamic optimizer by the profiling hardware" as claimed by the Applicant.

On page 8 of the instant Office Action, the Examiner acknowledges that Wu fails to disclose “update profile phase transitions, and signal phase transitions” (previous claim 2) and “generating an interrupt signal by the hardware when the profile transition occurs” (previous claim 8). Thus, Wu fails to disclose “signaling profile phase transitions to a dynamic optimizer by the profiling hardware” as presently claimed by the Applicant.

On pages 8-10 of the instant Office Action, the Examiner cites Conte as disclosing the above highlighted claim limitations. The Applicant respectfully disagrees.

Conte discloses using hardware branch buffers to add weights to a statically-built Control Flow Graph (CFG) (page 14, right column, last paragraph). During program execution, the kernel periodically reads hardware buffers and uses the buffer contents to update a table of CFG arcs. The table of CFG arcs is later updated on disk (page 15, left column, first paragraph). This information is used in recompiling the program (page 13, left column, first paragraph). Thus, Conte discloses using kernel-mode instructions to read hardware buffers, but not “signaling profile phase transitions to a dynamic optimizer by the profiling hardware” as claimed by the Applicant.

In the instant Office Action, the Examiner cites Conte, page 14, left column as disclosing “signaling phase transitions” (previous claim 2) and “generating an interrupt signal” (previous claim 8). While the Examiner asserts this section discloses detection of phase transitions, it does not disclose signaling the phase transitions to software by hardware. Thus, page 14 of Conte does not disclose “signaling profile phase transitions to a dynamic optimizer by the profiling hardware” as claimed by the Applicant.

In regards to previous claim 8, the Examiner also cites page 18, section 4.1 and the discussion of “exceptions.” However, the “exceptions” are related exceptions to the trace selection error (TSE) rate of two-level profiling (TSE defined on page 17, left column, first full paragraph). This “exception” has nothing to do with “signaling profile phase transitions to a dynamic optimizer by the profiling hardware” as claimed by the Applicant.

In regards to previous claim 8, the Examiner also asserts that Conte, page 12, section 1, discloses “generating an interrupt signal.” While page 12 discloses drawbacks of gathering profile information using test inputs, page 12 fails to disclose “signaling profile phase transitions to a dynamic optimizer by the profiling hardware” as claimed by the Applicant. If the Examiner maintains the rejection, the Applicant respectfully requests the Examiner provide further explanation as to how page 12 discloses “signaling profile phase transitions to a dynamic optimizer by the profiling hardware.”

Thus, Duesterwald, Wu and Conte, whether taken singularly or in combination, fail to disclose, teach, or fairly suggest at least one of the expressly recited limitations of claim 1. Accordingly, claim 1 is not anticipated nor rendered obvious by the cited references. Independent claims 10 and 19 distinguish for at least the same reasons as claim 1. Claims 2-9, 11-18 and 20-27 are dependent claims and distinguish for at least the same reasons as their independent base claims in addition to adding further limitations of their own. Therefore, the Applicant respectfully requests that the instant § 102 and § 103 rejections be withdrawn.

*New claims 28 and 29*

The Applicant respectfully submits that new claims 28 and 29 are allowable based on their dependency from allowable independent claims 1 and 19, respectively. No new matter has been added; the Examiner's attention is directed to at least paragraph [0066] of the Applicant's specification as originally filed.

*Conclusion*

The Applicant submits that in view of the remarks and amendments set forth herein, all pending claims are in condition for allowance. Therefore, the Applicant respectfully requests the Examiner to issue a Notice of Allowance in this case.

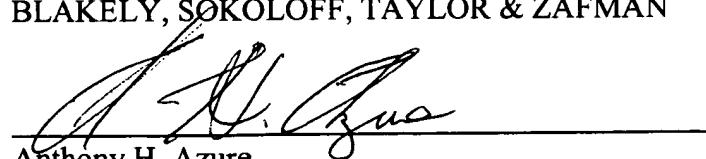
*Charge Deposit Account*

Please charge our Deposit Account No. 02-2666 for any additional fee(s) that may be due in this matter, and please credit the same deposit account for any overpayment.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN

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Anthony H. Azure  
Reg. No. 52,580  
Phone: (206) 292-8600 x311